2.9 Jacking Points and Ground Transport

Jacking Points

For wing bending frequency tests, the aircraft must be jacked up so that the main wheel springing should not distort the results.

Jacking points for the wing bending frequency tests are:

1. In front of the tail wheel
2. Front part of fuselage in the region of the lap belt anchoring points, on a support trestle.

The jacking points are also illustrated in Fig. 3.0-1.

The wings may be supported on trestles positioned in the area of the root ribs and at approx. 2/3ds span. The trestles should be padded, or cushioned with foam rubber or similar resilient underlay. When jacking up wings, avoid stress or damage to control surfaces and linkage fairings.
The fuselage may be propped up in the cockpit region by means of suitable supports.

Before inverting the fuselage, remove the canopy. The instrument pod should be either fixed in place or hinged up to its fullest extent.
The vent hole of the brake fluid reservoir cover must be sealed by tape!
WARNING: After rotating the fuselage back upright remove the tape! Remove spilled fluid and clean with cleaning spirit.

The elevator actuator must be protected from damage. A wooden block of appropriate height must be laid under the fin-stabilizer attachment area.

Ground Transport

The wings may be supported at the spar stubs, root ribs and wingtips.
If installed, derig the winglets first.

2.10 Tow Release Couplings

The tow release coupling fitted at the C.G. is model TOST "Europa G 73". (Data Sheet No:60.230/2). Model TOST "Europa G 72 or G 88" may be used as a replacement tow release coupling.

Depending on the position of its installation, different aerotow release models may be installed.
In the tip of the fuselage nose, model TOST “E 22” is used (Data Sheet No:11.402/9 NTS).
Between stick and pedals, models TOST "E 85" or "E 72" or "E 75" are used. (Data Sheet No:60.230/1).

The replacement of tow release couplings is described in Section 10.4.

2nd Stage:
When a service life of 4000 flying hours has been reached the above inspection program must be repeated. If the results are positive, or any defects found have been satisfactorily repaired, the service life may be increased to a total of 5000 flying hours.

3rd Stage:
When the glider has reached a service life of 5000 hours, a further inspection in accordance with the inspection program laid down must be carried out. If the results are again positive, or any defects discovered are satisfactorily repaired, the total service life may be extended to a span of 6000 hours.
For a possible extension of service life beyond 6000 hours, detailed requirements will be established in due course.

Inspection Program
The appropriate inspection program must be obtained from the manufacturer. The inspections may be carried out only by the manufacturer, or by an appropriately licensed aircraft repairer.
The results of the inspections must be listed in an inspection report in which each item must be annotated with a comprehensive comment, as laid down. If the inspection is carried out by a licensed aircraft repairer, a copy of the inspection report should be forwarded to the manufacturer for the purpose of evaluation.
The need for annual Certificate of Airworthiness inspections and overhauls (for German registered gliders § 27 (1) LuftGerPO applies*) is not affected by this rule.
* LuftGerPO = Aeron. Products Examination Order

4.2 Special Servicing Procedures and Equipment subject to Service Life Limitations

Special Servicing Procedures

At regular intervals of 5 years, the sealing rings and groove sealing rings of the water ballast valves must be checked, and replaced if required (see Fig. 2.4-1).

At regular intervals of 6 years the brake line hose of the hydraulic wheel brake must be replaced. Should this hose be found to be in good condition, it need not be replaced, on condition that its condition is checked at least every 100 flying hours.

Equipment subject to Service Life Limitations

Tow Release Couplings

The tow release coupling fitted at the C.G. is model TOST "Europa G 72" or "G 73" or "G 88" respectively ,

The aerotow release is either the model TOST “E 22” (if installed at the tip of the fuselage nose) or one of the models TOST "E 85" or "E 72" or "E 75" (if installed between pedals and stick).

The above TOST tow releases must comply with the service life limitations between inspections as laid down in their respective authorized release certificates.

The relevant "Operations and maintenance instructions" issued by the manufacturer TOST must be complied with.

Control Surfaces Hinges

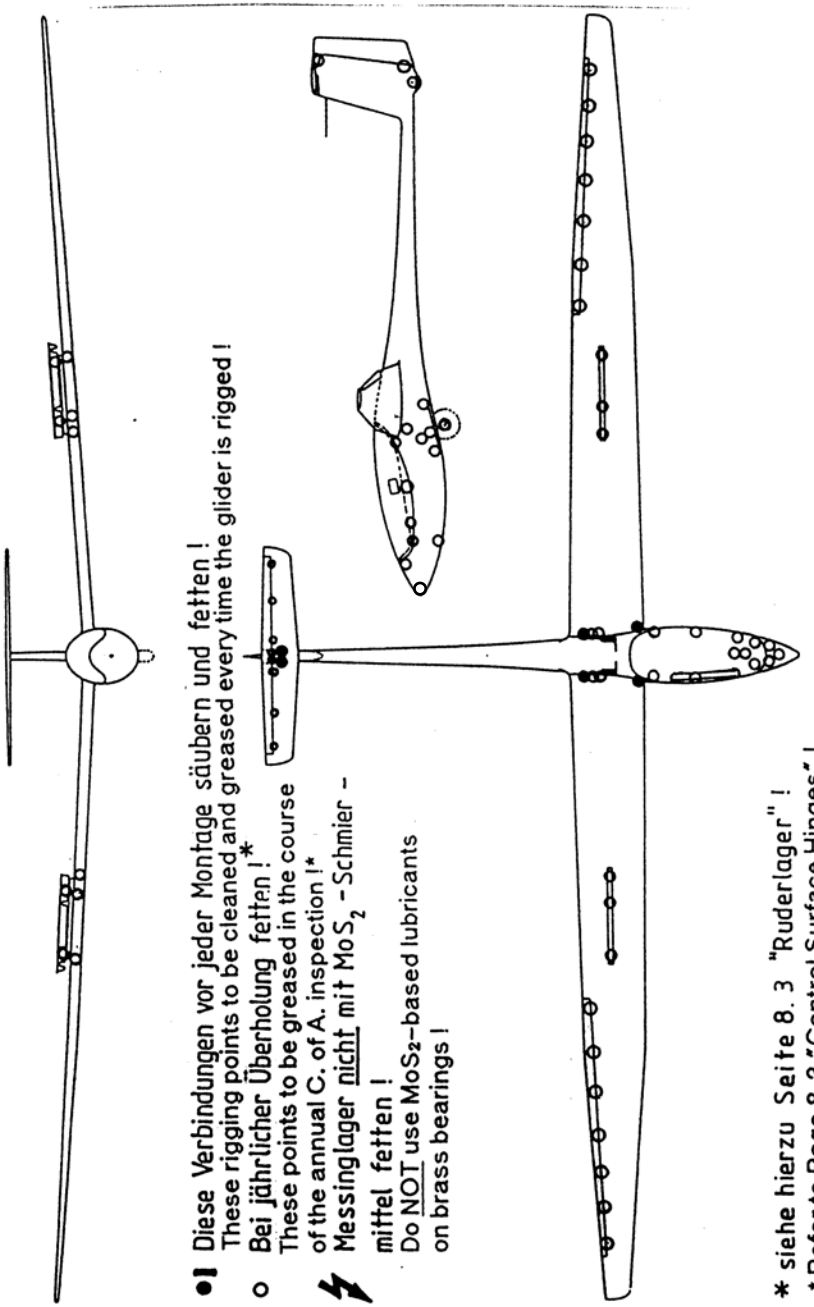
As series production standard the ASW 24 is equipped with elastic fairing strips at the control surface gaps. Under the elastic fairing strip the aileron and the elevator use in addition a Teflon tape to ensure proper sealing of the gap. Consequently the control surfaces hinges are not exposed to any substantial soiling.

Without the need of removing the elastic fairing strips, the degree of soiling can be checked at the lower rudder hinge and at the inner elevator hinges (when the horizontal tail is disassembled).

Depending on the degree of soiling it should be decided during the next annual C. of A. whether it is necessary to re-lubricate the control surface hinges.
If these are heavily soiled or if the controls are not free moving, the elastic fairing strips and the Teflon tape must be removed on the upper wing surface and the top surface of the horizontal tail in order to re-lubricate the hinges.

In the upper rudder hinge a self-lubricating maintenance-free plastic friction-type bearing bush is fitted.

Fig.8.0-1 Lubrication Chart



● Diese Verbindungen vor jeder Montage säubern und fetten !
These rigging points to be cleaned and greased every time the glider is rigged !

○ Bei jährlicher Überholung fetten !*
These points to be greased in the course of the annual C. of A. inspection !*

⚡ Messinglager nicht mit MoS_2 - Schmier - mittel fetten !
Do NOT use MoS_2-based lubricants on brass bearings !

* siehe hierzu Seite 8.3 "Ruderlager" !
* Refer to Page 8.3 "Control Surface Hinges" !

10.3.2 Removing the landing gear

1. Undo the safety springs from the L/G doors.

2. Remove the wheel. In this case first unscrew the brake hose from the wheel brake cylinder and tape the apertures so that no brake fluid may run out. The bolt which holds the torque plate of the wheel brake cylinder, and the wheel axle must be removed. Now the wheel with the wheel brake cylinder can be pulled off the wheel fork.

3. Take off the two safety springs from the horizontal struts.

4. Unscrew the shock absorber legs and the horizontal struts from the wheel fork.

5. Dismount the battery box in the baggage compartment.

6. Undo the bolts which connect the A-strut on the right side with the actuating lever and on the left side with the bearing.
   Pull the actuating lever and the bearing from the side out of the A-strut.

Installing the Landing Gear back in place is done in the reverse order. When installing the shock aborsber legs be sure that the flat side of the rubber buffer discs shows upwards !
Bleed the wheel braking system. Check the brake system for leaks, action and effective brake operation !

10.4 Removing and installing tow releases

10.4.1 Tow release coupling fitted at the c.g.

1. Remove the seat back and the seat pan.
2. Undo the safety springs from the L/G doors.
3. Remove the wheel. First proceed as described in Section 2.3.4 “Exchange of Brake Linings”: dismount the wheel brake cylinder. The brake hose-line must be left attached throughout! The bolt which holds the torque plate of the wheel brake cylinder, and the wheel axle must be removed. Now the wheel with the wheel brake cylinder can be pulled off the wheel fork.
4. Take the two safety springs off the horizontal struts.
5. Remove the shock absorber legs.
6. Unscrew the release cable off the end fitting and turn out the three bolts which hold the tow release coupling. Pull out the release coupling to the front.

10.4.2 Tow release fitted at the nose

If installed between pedals and stick:

1. Remove the pedal adjustment cable and knob, if necessary also the trim indicator
2. Remove the back rest and unscrew the seat pan.
3. Turn out the three bolts which hold the tow release. Pull out the release to the rear.

If installed at the tip of the nose:

1. Move rudder pedals backwards. It may be handy to tie them down.
2. Remove cover from the bulkhead visible in the fuselage nose.
3. The release is then visible through the first bulkhead. Two brackets hold it attached to the second bulkhead. Remove the four nuts from the brakkets.
4. Pull out the release to the rear. It fits easily through the first bulkhead when it is swayed a bit.
5. Pull one of the pins at the release rope fitting and unscrew the brack-ets

Installing the tow releases is done in the reverse order.

When installing the nose hook, use only new split pins. Take care that none of the pins on the rope attachment can hit the housing. Do not for-get to screw on the ground line together with the bracket. Attach the bulkhead cover with sili-cone.

When re-fitting tow releases, care should be taken to always use bolts of strength grade 10.9 or even 12.9 and nuts of the strength grade 6. When the tow releases are exchanged, new bolts and nuts must be used for re-installation. See also "Operating Manuals for tow release couplings" from Messrs. Tost.

12.2 Special Tools

For Rigging the horizontal tailplane:
a) Socket (Allen) wrench 6 DIN 911-12.9 and
b) Light alloy sheet, P/N 99.000.4657
For filling with waterballast:
c) Connector P/N 99.336.0022 and
d) Plug P/N 99.000.8861
For fitting the water ballast valve:
e) Forked key Gedore No. 44/7" with bolt ends 3mm ⌀

12.3 Supply Sources for Special Tools

The special tools b) through d) are supplied by Messrs. A. Schleicher only.
The Allen wrench a) as well as the forked key e) is available from all good tool shops, but can also be obtained from Messrs. A. Schleicher.

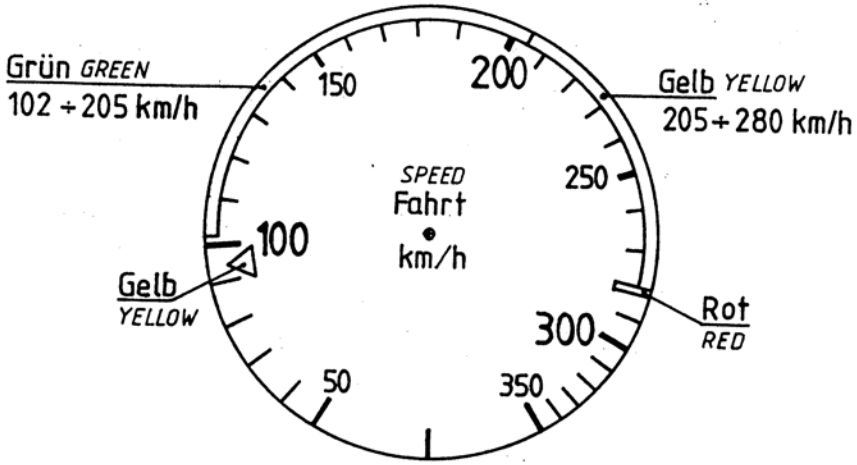
12.4 List of Maintenance Documents for Fitted Equipment

a) Operating Manual for Safety Tow Release Series "Europa G 88", "Europa G 73", "Europa G 72" in its valid issue

Operating Manual for Aerotow Release Series "E 85", "E 75", "E 72" in its valid issue

Operating Manual for Aerotow Release Series "E 22", in its valid issue

b) WHEEL and BRAKE ASSEMBLIES CATALOG
Component Maintenance Manual,
Appendix A, Fits and Clearances
A-1. Brake Lining Wear Limits
A-2. Brake Disc Minimum Thickness
from Messrs. Parker Hannifin Corporatin, Avon, OH. USA.

12.5 Air Speed Indicator Markings

JAR 22.1543:
(a) When markings are on the cover glass of the instrument, there must be means to maintain the correct alignment of the glass cover with the face of the dial; and
(b) each arc and line must be wide enough and located to be clearly visible to the pilot and not mask any portion of the dial.